

# nth degree

The American Data Cable model 551A Digital Temperature Probe adds plug-in temperature measurement and recording capability to Apple II computer systems.

The 551A measures temperatures in the range of -60 degrees C to +105 degrees C with an accuracy of better than 1 percent. Fluctuations as small as 1/100 degree C can be detected.

The probe may be purchased alone or with system packages which include software and the interface unit for 1, 8 or sixteen temperature channels.

The model 550A 1-Channel Temperature Measurement System includes one model 551A temperature probe, a manual and a DOS 3.3-compatible 5.25-inch diskette with programs which support collection, logging, and display of data in several formats. Measurements may be in degrees Centigrade, Fahrenheit or Kelvin. The manual describes installation and use of the probe and includes various temperature formulas. A Histogram program which displays and prints data in "strip-chart" format is available as an option.

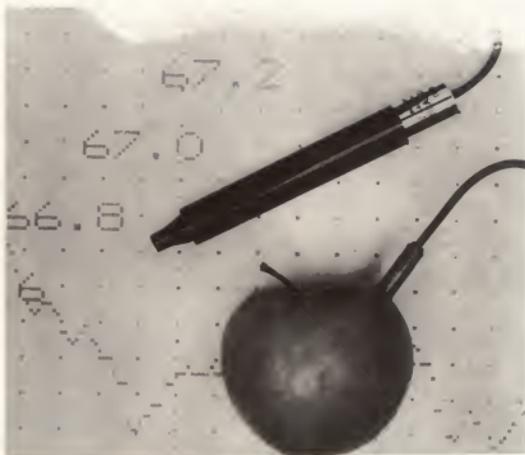
The model 551A Temperature Probe uses low-cost shielded audio cable for connection to the Apple computer. This cable may be extended up to 1000 feet without reducing accuracy. Probes may be connected and disconnected from the computer without opening the computer cover. The hand-held probe cartridge is made of easy-to-clean vinyl plastic. It is water-resistant and may be used in most liquids without damage. No part of the probe exterior package is electrically conducting.

Taking a reading with the 551A probe is very easy. Touching the surface or material to be measured for a few moments is all that is required to obtain an accurate reading. It automatically measures air temperature when not in contact with other surfaces.

The model 551A Temperature Probe comes from the factory calibrated to better than .5 degree accuracy over the range of 32 to 120 degrees F. Where temperatures change very slowly and in laboratory applications accuracies of .01 degree may be obtained. Instructions are provided which allow the user to recalibrate the system for maximum accuracy over any temperature range.

For users who need to measure more than one temperature at a time, the model 556R 8-Channel System allows connection of up to eight model 551A Temperature Probes which can all be working at the same time.

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## MEASURE TEMPERATURE WITH APPLE II

# Save time, reduce costs

Professionals in Analysis, Research, and Development often need to make fast, accurate temperature measurements. Now ADC makes it possible to measure with computer accuracy and convenience at a cost so low that time-consuming manual methods are expensive by comparison.

The Nth Degree Temperature Measurement System provides the benefits of speed and precision combined with easy-to-read graphic data display, printed logs and archival storage of original data for future analysis.

The Nth Degree is available as a low-cost peripheral for Apple II compatible computers. Other computers may also use the Nth Degree through a terminal port to the DATAFACE RS-232 communications unit. The DATAFACE may also be used with the Nth Degree for remote data collection via telephone lines.

Although the Nth Degree offers convenience, performance and features found elsewhere only in systems costing five or ten times as much, the Nth Degree is inexpensive and has no "hidden" costs. In fact, the Nth Degree is so economical that you can probably afford more channels of temperature than you expected on the same budget.

The Nth Degree combines the power of computer-controlled measurement with a tested, reliable software system. The THERMONITOR Operating System works in conjunction with version 3.3 disk operating systems to simplify the measurement process while allowing the user to manage important variables as desired.

Well-documented program configuration features make design of custom systems easy. You can create and save custom configurations for your special requirements and invoke them automatically. "Hands-off" automatic startup permits inexperienced or untrained operators to obtain consistently correct results.

American Data Cable, Inc. is established with many of the nation's largest companies and agencies as a source for R&D tools. ADC's experience in R&D requirements combines with extensive in-house computer systems capability to ensure that the Nth Degree is suited to your needs.

Several years of development and testing have gone into the hardware and software technology of the Nth Degree temperature measuring system. Additional features, interfaces, capabilities and enhancements will be regularly added to the Nth Degree measurement facility from this continuing development program.

The Nth Degree is so easy to install and to use that you can have it up and working in your lab in minutes. It's also easy to upgrade the Nth Degree from a single-channel to eight, sixteen, or as many as 256 temperature channels per system.

Right now and for a long time into the future, the Nth Degree is the most attractive solution you can find to your temperature measurement needs.

Don't delay. Get acquainted with the Nth Degree today.

# Nth Degree

Products for the Apple II computer with DOS 3.3

<u>Model</u>	<u>Description</u>	<u>Price</u>
550A	Temperature Measurement System—One Channel Includes type 551A Calibrated Temperature Probe, Apple II interface adapter, THERMONITOR program and routines on 5.25 inch DOS 3.3 disk, and Nth Degree User's Manual.	\$ 129.95
551A	Calibrated Temperature Probe Calibrated probe with instruction sheet. Use as alternate probe with 550A or as additional probe with 556A or 557A multiplexers.	89.95
556A	Temperature Measurement System, 1 to 8-Channels Permits up to eight type 551A Calibrated Temperature probes to be used simultaneously on one computer. Includes one Calibrated Temperature Probe, 8-channel controller, manual, and DOS 3.3 disk with THERMONITOR and multichannel driver programs. For channels 2 thru 8 order model 551A.	189.95
557A	Temperature Measurement System, 1 to 16-Channels Permits up to 16 type 551A Calibrated Temperature probes to be used simultaneously on one computer. Includes manual and DOS 3.3 diskette with THERMONITOR and multichannel driver programs, plus one model 551A Calibrated Temperature Probe. For channels 2 thru 16 order model 551A.	229.95
561A	Strip-Chart Recorder Program Program provides a continuous display plot of temperature data in strip-chart form, using high-resolution graphics. Scales data and rolls display to left on each reading. Print drivers for EPSON MX-80. Includes manual and DOS 3.3 diskette.	49.95

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Apple II is a trademark of Apple Computer Corp.

## American Data Cable, Inc.

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## SPECIFICATIONS

550A, 556A and 557A TEMPERATURE MEASUREMENT SYSTEMS with  
551A TEMPERATURE PROBES:

ACCURACY	551A initial calibration plus or minus .5 degrees Celsius. Can be calibrated to .1 degree Celsius or better. Special calibrations available on request.
USEFUL RANGE	Minus 60 degrees to plus 105 degrees Celsius.
REPEATIBILITY	0.1 degree Celsius or better.
RESOLUTION	0.01 degree Celsius or better.
RESPONSE TIME	5 seconds to 66 percent of nominal.
DIMENSIONS	Overall probe size is 4 1/2" long by 1/2" diameter. Sensor area is curved surface approx. 0.25 inch (6mm) diameter.
COLORS	Orange, green, brown, light blue, dark blue, black, red, pink, yellow and purple.
INSTALLATION	Comes ready for easy setup and operation. Probes may be changed without opening computer enclosure.
PROBE	Easy-to-clean vinyl plastic. Water-resistant and washable. The unit may be sterilized or immersed in most liquids without damage. All probes, including replacements, are interchangeable with no loss of accuracy. Each probe is supplied with individual calibration data.
CABLE	Each probe is equipped with 6 ft. cable and connector. The 2-conductor probe cable may be extended up to 1000 feet without reducing the accuracy of the device. Twisted-pair or shielded wire recommended.
OPTIONS	Choice of one-channel, eight-channel or sixteen-channel controllers. Expanders permit 256 channels or more per computer.
INTERFACE	In a single-channel configuration, the 551A probe connects via the computer cassette port. In 8- and 16-channel configurations the probes plug into the controller, which connects to the game port.
APPLICABILITY	5xx: Apple-II compatible computers with 48K DOS 3.3 .
SOFTWARE	THERMONITOR software provides temperature measurement and display programs with large-digit, "strip-chart", or tabular display and automatic logging of data on disk or tape.



## PRICE AND CONFIGURATION DATA

Model	CPU Intf.	Description	Price
520A	AIIE-D	Direct-wire Power Control interface and prog.	\$119.95
521A	***	Direct-wire 1-circuit power control	\$ 22.95
531A	AIIG-D	Power-line control interface and program	\$119.95
532A	***	Master power control unit	\$ 34.95
533A	***	Ultrasonic Remote Control	\$ 22.95
534A	***	Wall Receptacle Circuit Control	\$ 24.95
534A	***	Wall Switch Circuit Control	\$ 22.95
536A	***	Plug-in Circuit Control	\$ 18.95
550A	AIIC-D	Temp. Measurement System, 1 ch w/ probe	\$129.95
550A	AT4G-T	Temp. Measurement System, 1 ch w/ probe	\$129.95
550A	AT8G-D	Temp. Measurement System, 1 ch w/ probe	\$129.95
550A	C64G-T	Temp. Measurement System, 1 ch w/ probe	\$129.95
551A	***	Calibrated Temperature Probe	\$ 89.95
556A	AIIG-D	Temp. Measurement System, 1-8ch w/ 1 probe	\$189.95
556A	AT4G-T	Temp. Measurement System, 1-8ch w/ 1 probe	\$189.95
556A	AT8G-D	Temp. Measurement System, 1-8ch w/ 1 probe	\$189.95
556A	C64G-T	Temp. Measurement System, 1-8ch w/ 1 probe	\$189.95
557A	AIIG-D	Temp. Measurement System, 1-16ch w/ 1 probe	\$229.95
557A	AT4G-T	Temp. Measurement System, 1-16ch w/ 1 probe	\$229.95
557A	AT8G-D	Temp. Measurement System, 1-16ch w/ 1 probe	\$229.95
557A	C64G-T	Temp. Measurement System, 1-16ch w/ 1 probe	\$229.95
561A	AII*-D	Strip-Chart Recorder Program for Thermonitor	\$ 49.95
562A	AII*-D	Strip-Chart Recorder Program for stand-alone	\$ 69.95

### ACCESSORIES

Model	Description	Price
550A-X001	Isolated power supply for 550A-AIIC	\$ 19.95
551A-X001	Mounting accessory set	\$ 5.95
551A-X002	Connector set for extension cable	\$ 2.95
551A-X003	Twisted-pair extension wire, 500 feet	\$ 45.95

Computer interfaces :

- AIIC Apple II and equivalent via cassette port
- AIIG Apple II and equiv. via game port
- AIIE Apple II and equiv. via expansion slot
- AT4G Atari 400 via game port
- AT8G Atari 800 via game port
- C64G Commodore 64 via game port
- X# Accessory Product
- \*\*\* See product description for interface

Software medium :-D 5.25-inch diskette  
 -T audio cassette tape

Note: Price, availability and technical data are subject to change without notice. See "Ordering Information". Call for latest information.